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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,119	10/10/2003	Atsuo Sakai	243905US2	8221

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EXAMINER

YEAGLEY, DANIEL S

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/682,119	Applicant(s) SAKAI, ATSUO	
	Examiner Daniel Yeagley	Art Unit 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11 – 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, lines 11-12 and line 16; the terms “the steering actuator” lacks sufficient antecedent basis. It is unclear which steering actuator applicant is referencing; the vehicle wheel steering actuator of the vehicle wheel steering mechanism or the steering actuator of the steering wheel steering mechanism.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 11 – 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Serizawa et al ‘441.

Serizawa discloses a steering control device configured such that a steering wheel steering mechanism and a vehicle wheel steering mechanism are mechanically separate and operationally connected by an electronic mechanism rather than by a mechanical connection

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(steer-by-wire figure 10 wherein the control device comprises a steering angle sensor 5 that detects a steering angle of a steering wheel 1, a steering change amount sensor 22 that detects a steering change amount in a vehicle wheel steering mechanism 9, wherein the steering wheel steering mechanism includes an end-of-movement reaction force generation unit (figure 1) that respectively generates, in a vicinity of an upper limit point of the steering angle and a vicinity of a lower limit point of the steering angle, a virtual contact resistance force that inhibits the steering angle from exceeding threshold values of a predetermined permissible range of the steering angle, based on the steering angle, the steering change amount *or* a command value (column 4-10, in particular; column 6, line 25-34, 49-66, column 7, line 1-31, 63-66, and column 8, line 45-59), such that a steering angle threshold value variation unit dynamically changes the upper limit point and the lower limit point of the permissible range based on a vehicle speed (column 5 – 6), and further as best understood, the steering actuator imparts a steering reaction force to the steering wheel based on the sum of the reaction force signal generated from a reaction force control means based on a control value and the virtual contact resistance force signal, and includes a position control means for generating a command value for the vehicle wheel steering actuator based on the detected steering change amount and the detected steering angle of the steering wheel

Response to Arguments

5. Applicant's arguments filed 10/28/05 have been fully considered but they are not persuasive.

Serizawa clearly discloses substituting a measured value of a steering angle into a variable θ_{Hlim} (column 8 - 9), wherein the value is obtained using equations that contain a variable coefficient associated with the vehicle speed and does not appear to be a fixed value as argued, but would depend upon the changing value of the speed, steering change amount and steering angle and only the gain appears to be a fixed value. Wherein the control device of Serizawa further includes control parameters for the steering actuator that imparts a steering reaction force to the steering wheel based on the sum of the reaction force signal generated from a reaction force control means based on a control value and a virtual contact resistance force signal, and includes a position control means for generating a command value for the vehicle wheel steering actuator based on the detected steering change amount and the detected steering angle of the steering wheel as best understood.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Yeagley whose telephone number is (571)-272-6655. The examiner can normally be reached on Mon. - Fri; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley D. Morris can be reached on (571) - 272 - 6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D.Y.


LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
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